

1. (Currently Amended) ~~[[a]]~~ A device for infusion therapy comprising:  
a balloon catheter;  
a guide wire to be inserted into a guide lumen of the balloon catheter;  
pulsation detection means for detecting pulsation of the heart; and  
stroke means for causing said guide wire to stroke in synchronization with the  
pulsation of the heart based on a detection signal of the pulsation detection means,

wherein said balloon catheter is a balloon catheter for insertion into a blood  
vessel in which a plurality of lumens extending along an axis are formed in one catheter  
body, and two expandable balloons ~~expand~~ expanding toward outside with respect to the  
catheter body are arranged axially in parallel, and the balloon catheter previously combined  
with the guide wire is inserted into a coronary vein in reverse of the blood flow and adjusted  
so that a blood vessel area surrounding the lesion is placed between the two balloons, and  
wherein~~characterized in that~~ said plurality of lumens comprises:

an infusion lumen that has an infusion hole communicating with an outside of  
the catheter body between said two balloons, and can supply drugs, cells, a treatment  
instrument, or the like to the outside of the catheter body through said infusion hole;

balloon lumens that communicate with insides of said two balloons to control  
expansion of said balloons;

a bypass lumen that communicates with the outside of the catheter body in  
each position distal and proximal, which is outside of said two balloons with respect to a tip  
of the catheter body, and bypasses an occluded area formed by the two balloons to allow  
blood flow; and

a guide lumen into which a guide wire that guides the catheter body to a target  
position is inserted, and

said guide lumen communicating ~~communicates~~ with the outside of the  
catheter body in each position distal and proximal, which is outside of said two balloons to  
also serve as said bypass lumen, having one or more bypass holes in a position closer to a tail  
end than the two balloons.

2. (Currently Amended) A device for infusion therapy according to claim

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1, ~~characterized in that~~ wherein one balloon lumen communicates with the insides of said two balloons.

3. (Cancelled).

4. (Currently Amended) A device for infusion therapy according to claim 1, ~~characterized in that~~ wherein said device is a catheter for insertion into a coronary vein.

5. (Cancelled).